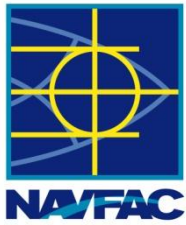




Basewide Groundwater Monitoring Program Basewide Groundwater Plume Status

**BCT Meeting
December 8, 2011
Hunters Point Naval Shipyard
San Francisco, CA**



Overview



- Basewide Groundwater Monitoring Program (BGMP) Objectives and Program Summary
- BGMP Development and BGMP Updates
- Current BGMP
 - HPNS CERCLA Documents
 - Well Inaccessibility
 - Groundwater Potentiometric Surface and Current Conditions Plumes Status
 - COCs, wells
- Schedule



Objectives and Program Summary



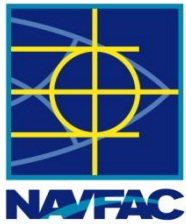
- **Primary Objective** - monitor groundwater conditions and provide data to stakeholders
- **Program Summary**
 - Sampling, analysis and data evaluation
 - Depth to water measurements (DTW) and construction of potentiometric surface maps
 - Measure non-aqueous phase liquid (NAPL) annually
 - Well installation, decommissioning, redevelopment, and maintenance
 - Issue Exceedance Memos per Remedial Action Monitoring Plans (RAMPs)
 - Semiannual Groundwater Reports
 - Optimize wellfields to revise the number of wells monitored and analyses required



Program Development and Updates



- BGMP well/analyte list, remedial goals, and trigger levels based on HPNS CERCLA documents and is modified as necessary- for 1Q2012 well list includes 159 wells
- BGMP periodically reviews via the wellfield optimization process, and recommendations for revisions are submitted to the regulatory agencies for approval
- Wells decommissioned/destroyed by HPNS construction are evaluated in context of sampling/DTW measurement
- Semiannual reports document approved well list revisions



HPNS CERCLA Documents



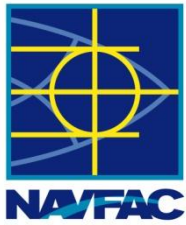
- **Remedial Action Monitoring Plans (RAMPs)-all final**
 - Sites 7/18 (Jan 2010)
 - Rest of Parcel B (Dec. 2010)
 - Parcel G (Oct. 2010)
 - Parcels UC-1 and UC-2 (Dec. 2010)
 - Parcel D-1 (Feb. 2011)
- **Feasibility Studies (FS)**
 - Parcel E-2 (finalized in May 2011)
 - Parcel E (draft final in Aug. 2011)



Parcel C CERCLA Documents



- **Record of Decision (ROD)**
 - Parcel C (Sept. 2010)
 - Treatability Studies
 - RU-C1 Building 253 (RACR finalized June 2011)
 - RU-C5 Building 134 (RACR will be finalized Jan. 2011)
 - Predesign Site Characterization planned Jan. 2012 for rest of RU-C1 and RU-C5 along with RU-C2 and RU-C4



Well Inaccessibility



- Ongoing HPNS construction and remedial action projects pose inaccessibility constraints on BGMP activities (e.g., excavations, wells covered by soil piles, and soil laydown pads)
- BGMP coordinates with Navy and Navy contractors to minimize/eliminate inaccessibility conditions
- The need for replacing wells decommissioned/destroyed by HPNS construction activities is periodically evaluated
- BGMP reports list inaccessibility issues, and provide estimates of when the wells will become accessible



Typical Well Inaccessibility



**Parcel E Well IR12MW16A –
Well in Trench**



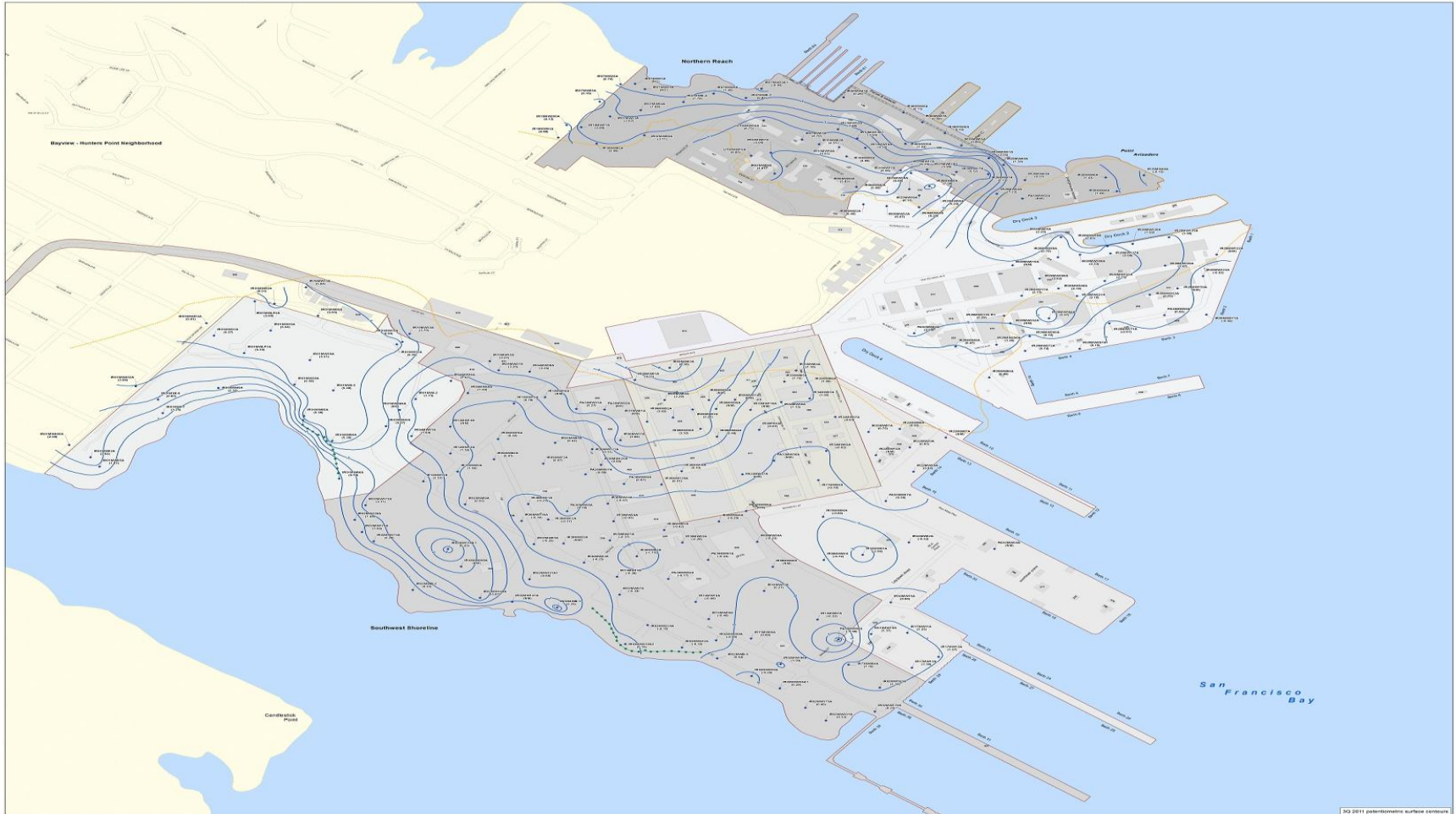
**Parcel E Well IR39MW22A -
Well Buried Under Graded Soil**



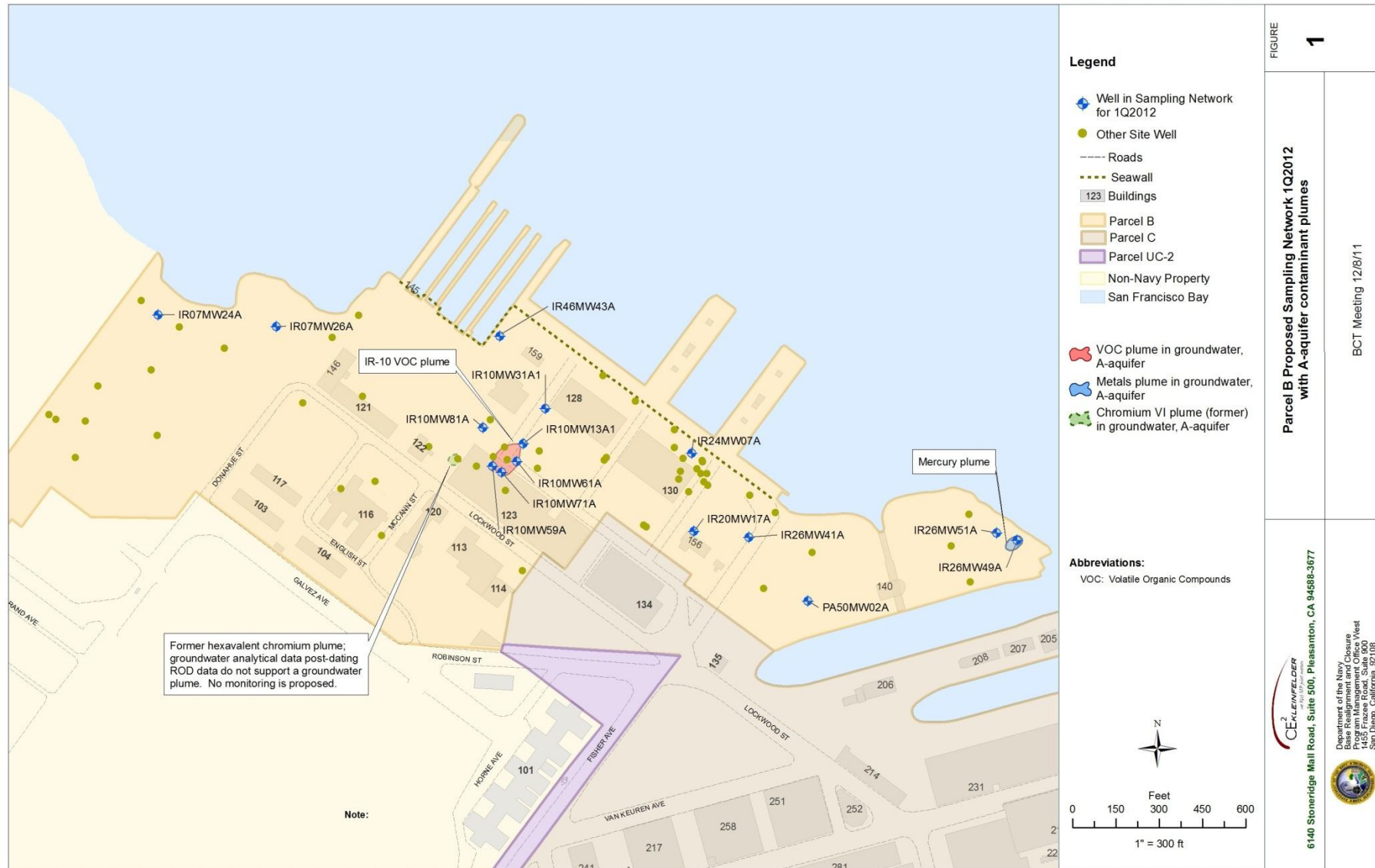
**Parcel E Well IR02MW298A –
Well Under Soil Laydown Pad**



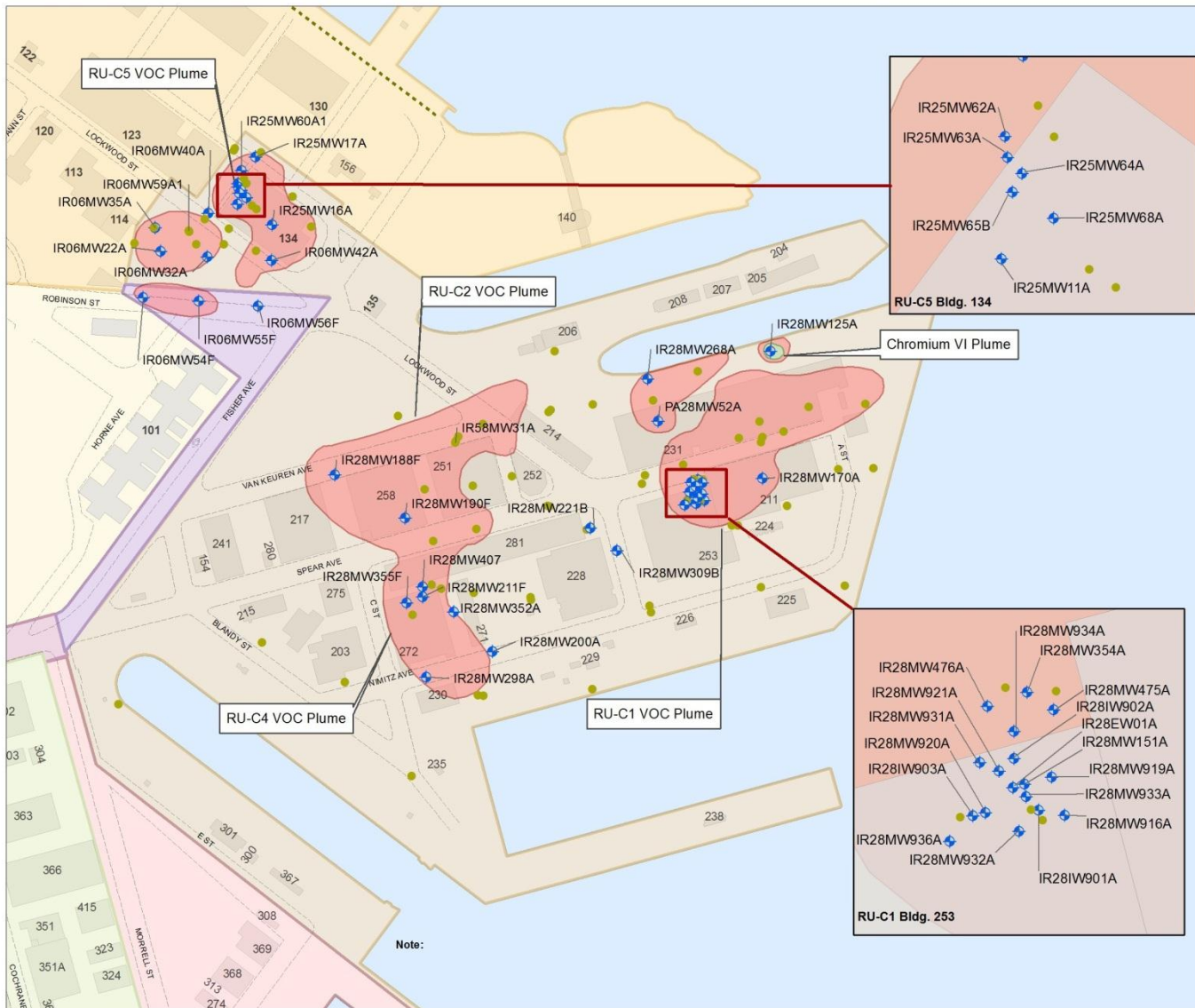
A-Aquifer Potentiometric Surface Map – 3Q2011



Parcel B Plume Map



Parcels C and UC-2 Plume Map



Legend

- ◆ Well in Sampling Network for 1Q2012
- Other Site Well
- Roads
- Seawall
- 123 Buildings
- Parcel B
- Parcel C
- Parcel UC-2
- Non-Navy Property
- San Francisco Bay

- VOC plume in groundwater, A-aquifer
- Chromium VI plume in groundwater, A-aquifer

Abbreviations:

VOC: Volatile Organic Compounds



0 150 300 450 600
Feet
1" = 300 ft

FIGURE

2

Parcels C and UC-2 Proposed Sampling Network 1Q2012
with A-aquifer contaminant plumes

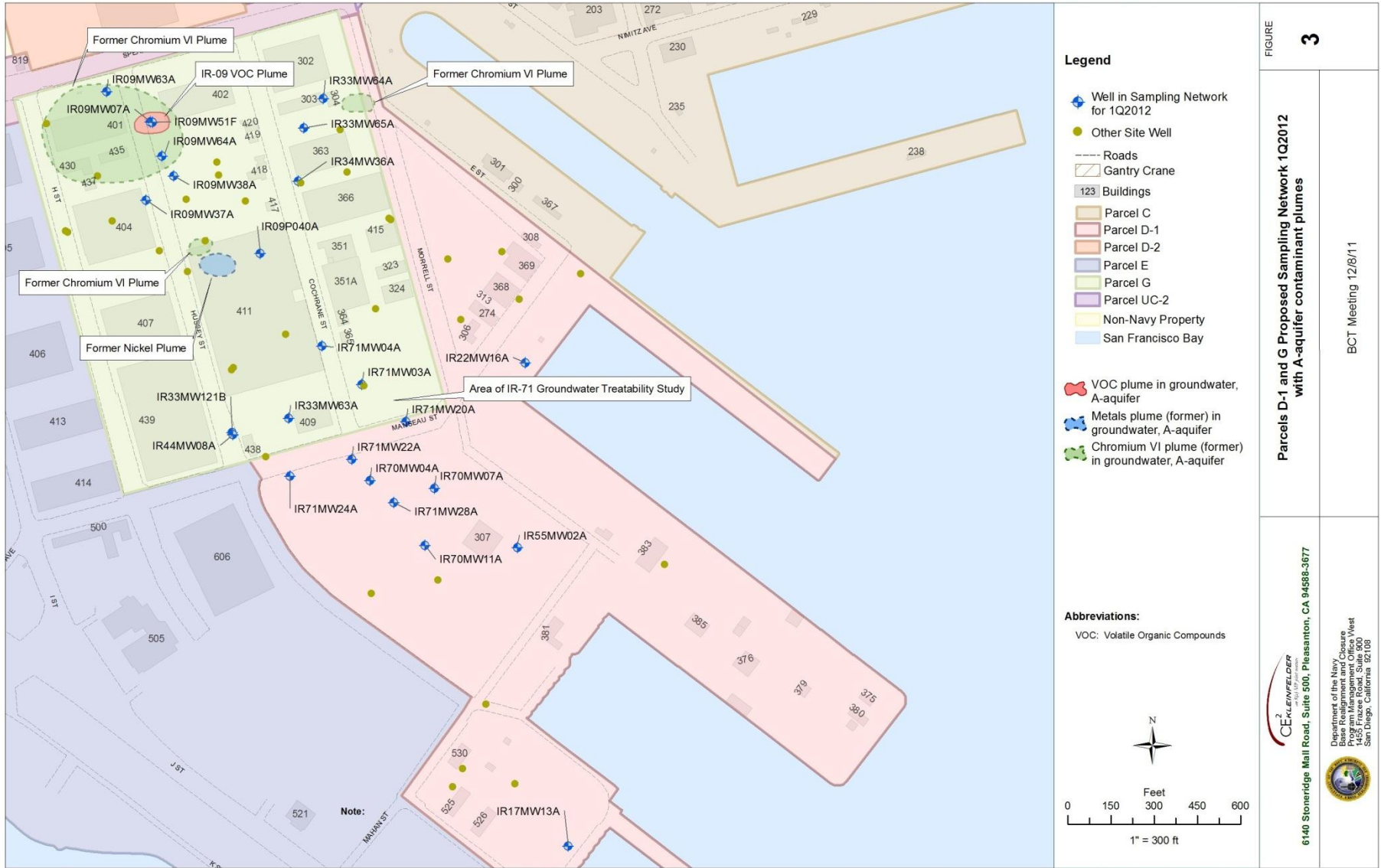
BCT Meeting 12/8/11

CE² KLEINFELDER
6140 Stoneridge Mall Road, Suite 500, Pleasanton, CA 94588-3677

Department of the Navy
Base Realignment and Closure
Program Management Office West
1455 Friess Road, Suite 600
San Diego, California 92105



Parcels D-1 and G Plume Map



Parcel E Plume Map



FIGURE

4

Parcel E Proposed Sampling Network 1Q2012
with A-aquifer contaminant plumes

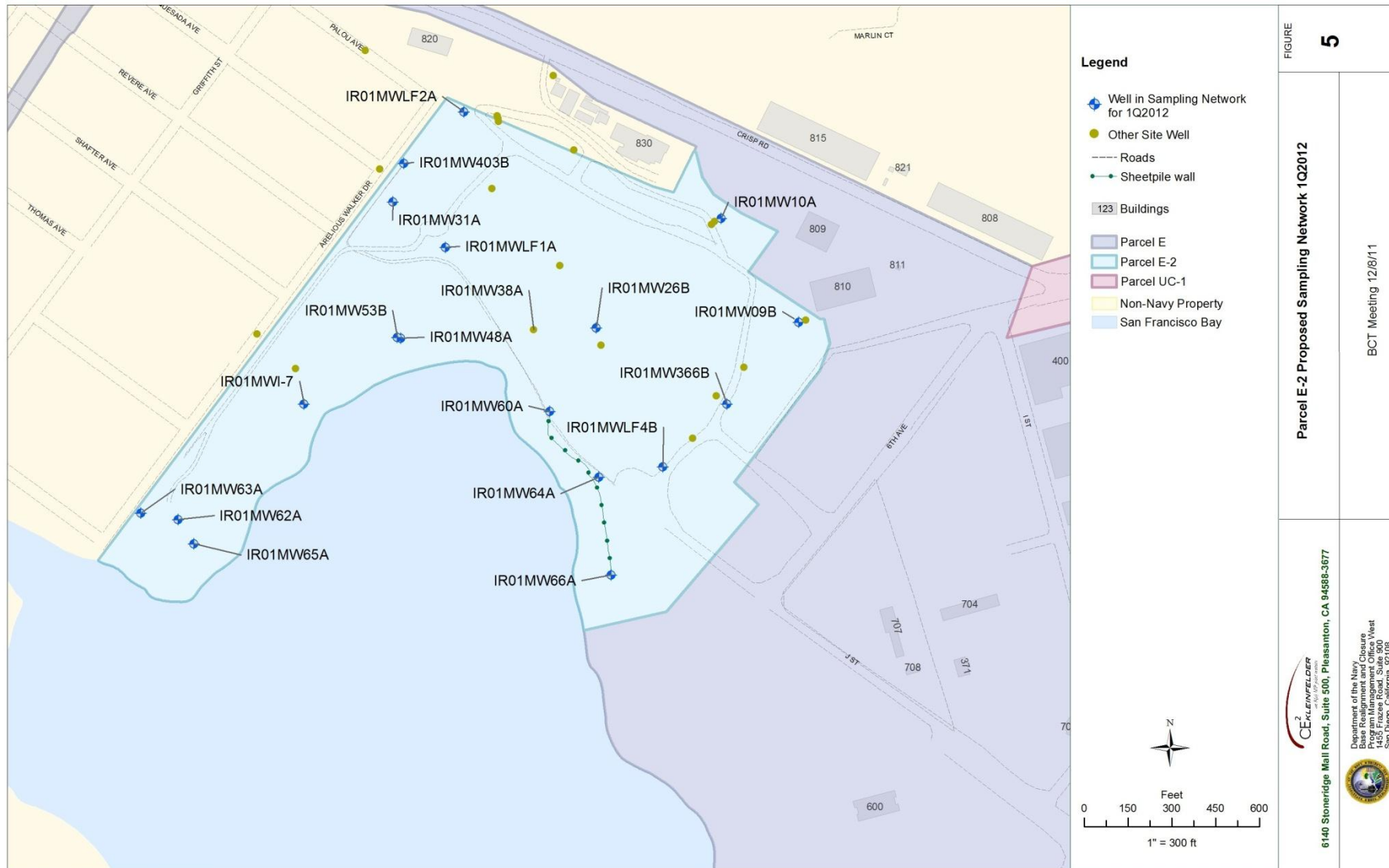
BCT Meeting 12/8/11

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Department of the Navy
Base Realignment and Closure
Program Management Office West
1400 S. Coast Highway, Suite 100
San Diego, California 92108



Parcel E-2 Monitoring Network





Schedule



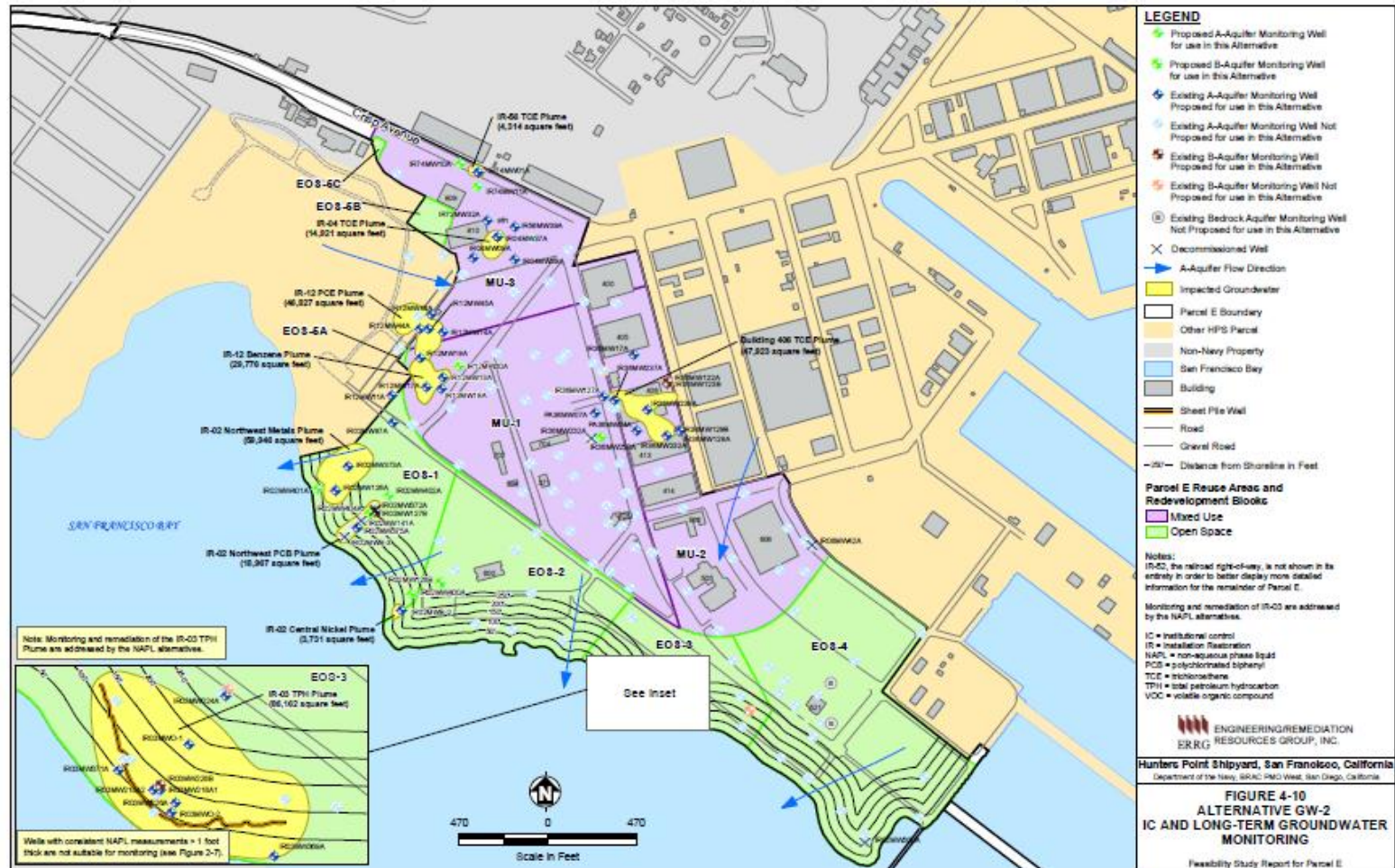
- Semiannual GW Monitoring Report
(3Q/4Q2011) 2 Jan 2012
- 1Q2012 Sampling Event Jan/Feb 2012
- Semiannual GW Monitoring Report
(1Q/2Q2012) Sept 2012
- Next wellfield optimization (incorporating data thru 3Q2011)
to be presented to BCT in April 2012; agreed-upon revisions
to be incorporated into 3Q2012 event.



Questions?

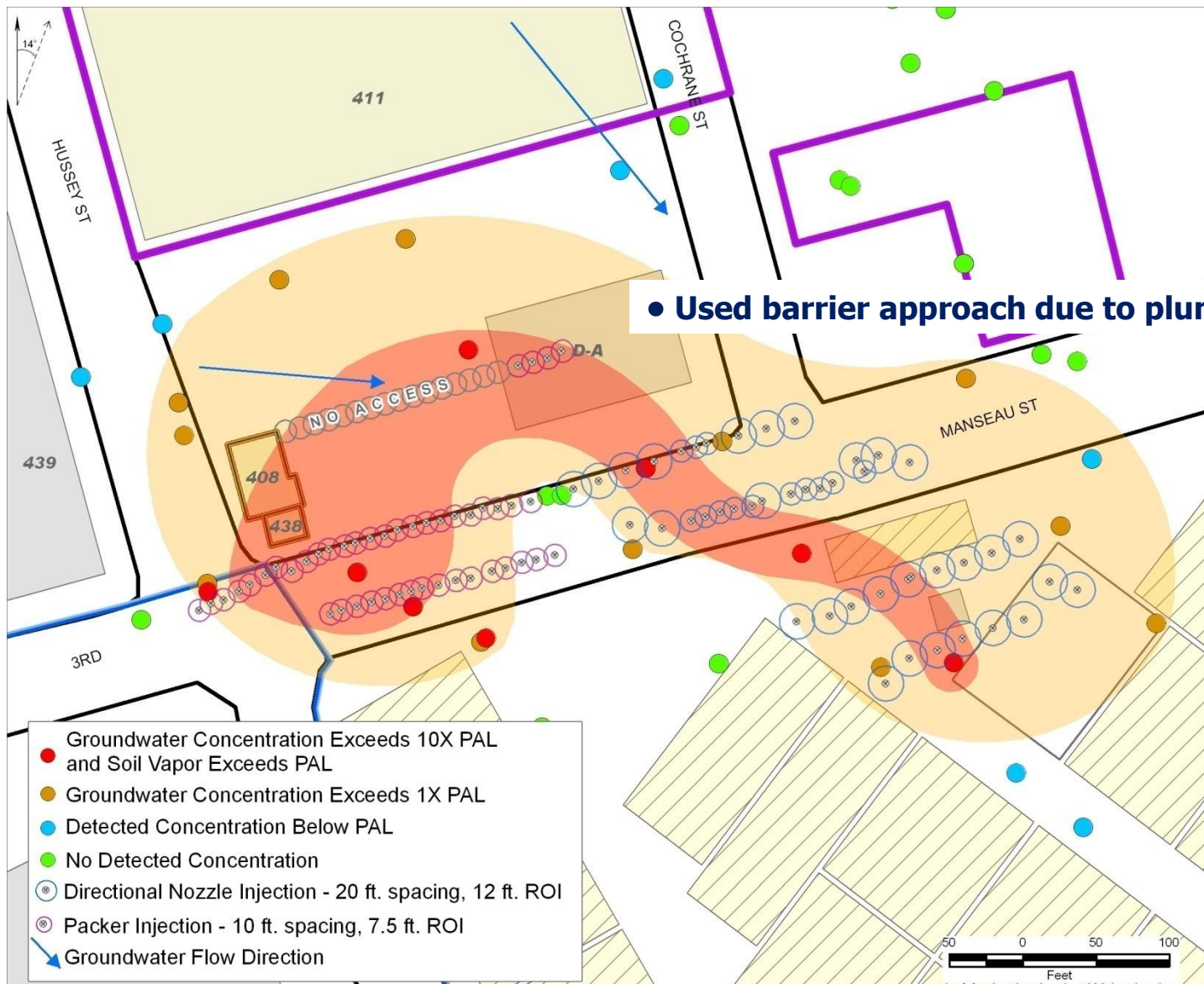


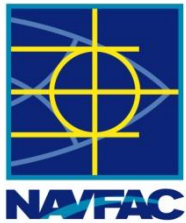
Parcel E Plume Map from DF FS





Phase II – IR-71 ZVI Injections into Newly Defined Chloroform Plume-Sept. 08





Phase III - IR-71 Post-Injection Jan 2009

